MEDICAL EVALUATORS
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DATE OF REVIEW:

IRO CASE #:

DESCRIPTION OF THE SERVICE OR SERVICES IN DISPUTE:
Denial of request for left S1 joint injection

A DESCRIPTION OF THE QUALIFICATIONS FOR EACH PHYSICIAN OR OTHER HEALTH CARE PROVIDER WHO REVIEWED THE DECISION
This case was reviewed by a Chiropractor who is currently licensed and practicing in the state of Texas.

REVIEW OUTCOME
Upon independent review the reviewer finds that the previous adverse determination/adverse determinations should be:

☒ Upheld

EMPLOYEE CLINICAL HISTORY [SUMMARY]:
The claimant is a female who was injured her lower back on XX/XX/XX as a result of bending and lifting. Ofiice visit note dated XX/XX/XX indicates that the claimant presented for reassessment of pain symptoms of 6 with medication and 10 without medication. The claimant participated in home exercise program and has been treated with meloxicam in the past. Physical examination revealed a positive Stork test for left S1 joint pain and superior iliac crest fortin finger for sacroiliac joint dysfunction bilaterally. Patrick-Fabere test positive on left. The claimant was diagnosed with low back pain, lumbar sprain and sacroilitis. The claimant was prescribed Tramadol and Cyclobenzaprine for the low back pain and recommended a left S1joint injection.

Progress note dated XX/XX/XX documented the claimant complained of worsening lower back pain for the last XX months. The claimant reported that her pain has been radiating to her right thigh with burning sensation down the right leg. The claimant recently underwent a new MRI which confirmed the L4-5, and L5-S1 disc herniation. Objective findings on exam included diminshed right Achilles reflex, mild ternderness on manual palpation of the L4-S1 facet joints. The claimant had myospasm and hypertonicity in the lumbar paraspinal musculature extending into the right latissimus dorsi. Straight leg raise test was positive in the right side approximately 60° with positive nerve root tension sign. Kemp test was positive in the right, and sitting straight leg raise test was confirmatory for radicular complaints. Patricks test and Yeoman test were both positive in the right side. The claimant was diagnosed with radiculopathy of the lumbar region and other intervertebral disc displacement of the lumbar region. XX recommended left S1 joint injection with XX.

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Prior UR dated XX/XX/XX denied the request for left S1 joint injection based the cureent clinical guidelines indicated that the use of sacroiliac joint injections are not supported as necessary. The clinical records supplied do not contain pertinent specific clinical information to support the necessity of the requested sacroiliac joint injection.

ANALYSIS AND EXPLANATION OF THE DECISION INCLUDE CLINICAL BASIS, FINDINGS AND CONCLUSIONS USED TO SUPPORT THE DECISION.

According to ODG, "diagnostic intra-articular injections are not recommended as there is no further definitive treatment that can be recommended based on any diagnostic information potentially rendered (as sacroiliac therapeutic intra-articular injections are not recommended for non-inflammatory pathology). Consideration can be made if the injection is required for one of the generally recommended indications for sacroiliac fusion." Further ODG indicates that therapeutic sacroiliac joint injection is not recommended (neither therapeutic sacroiliac intra-articular nor periarticular injections) for non-inflammatory sacroiliac pathology, based on insufficient evidence. Recommended on a case-by-case basis injections for inflammatory spondyloarthropathy (sacroiliitis).

In this case, this claimant subjective complaints include right sided lower back pain radiating into her right thigh and right leg. The physical findings documented on XX/XX/XX indicates positive Patrick-Fabere test and Stork test for left SI joint pain. The physical findings documented indicates positive tenderness on the right SI joint, positive SLR on the right and negative on the left, positive Kemp test on the right, positive Patrick and Yeoman tests on the right.

Although these findings suggest signs and symptoms of sacorilitis, the findings documented by XX are on the right side and the findings documented by XX are on the left side. These findings are contradicting and inconsistent. Additionally, the subjective complaints are on the right side and the request of SI joint injection is on the left side.

Based on the above reason, ODG recommendation as well as the clinical documentation stated above, the request of left SI joint injection is not medically necessary and appropriate.

A DESCRIPTION AND THE SOURCE OF THE SCREENING CRITERIA OR OTHER CLINICAL BASIS USED TO MAKE THE DECISION:

ODG- OFFICIAL DISABILITY GUIDELINES & TREATMENT GUIDELINES
Hip & Pelvis (Acute & Chronic)
Sacroiliac injections, diagnostic
Not recommended, including sacroiliac intra-articular joint and sacroiliac complex diagnostic injections/blocks (for example, in anticipation of radiofrequency neurotomy). Diagnostic intra-articular injections are not recommended (a change as of August 2015) as there is no further definitive treatment that can be recommended based on any diagnostic information potentially rendered (as sacroiliac therapeutic intra-articular injections are not recommended for non-inflammatory pathology). Consideration can be

made if the injection is required for one of the generally recommended indications for sacroiliac fusion. See Sacroiliac fusion. Also Not recommended: Sacral lateral branch nerve blocks and/ or dorsal rami blocks in anticipation of sacroiliac radiofrequency neurotomy. See Diagnostic blocks in anticipation of SI neurotomy below. See also Sacroiliac problems, diagnosis; Sacroiliac injections, therapeutic; Sacroiliac radiofrequency neurotomy.

Diagnostic injections (also referred to as diagnostic blocks): There are two basic types of SI joint diagnostic injections. Studies evaluating diagnostic blocks in anticipation for radiofrequency neurotomy have utilized a combination of both intra-articular and nerve blocks as well as nerve blocks alone. Most studies on SI joint fusion have used intra-articular blocks for diagnoses. In the case of the latter, there are no studies to evaluate the predictive value of this injection in terms of results of the surgical treatment.

(1) Intra-articular injections: In the past, intra-articular injections were those most commonly recommended for diagnosis of sacroiliac joint pain. These do not address the interosseous or dorsal sacroiliac ligaments. When performed, local anesthetic can escape the intra-articular region and anesthetize nearby structures. The latter can result in inaccurate blocks. Other causes of inaccurate blocks include use of sedative medications (to the point of limiting the patient's response to the procedure) and failure to achieve infiltration throughout the entire SI joint complex. A negative test is not able to exclude extra-articular causes of pain. (Berthelot, 2006)

(2) Sacral lateral branch nerve injections and/or medial dorsal rami injections (L4-5): These injections are thought to be of diagnostic value in addressing posterior SI joint pain and pain mediating from the posterior ligaments stabilizing the SI joint. They have therefore been suggested for use in eliciting an etiology of extra-articular sources of sacroiliac complex pain. They are suggested, in particular, in anticipation of radiofrequency neurotomy procedures. The efficacy of diagnosis by these injections has been questioned, in part, due to the variability of the innervation of the SI complex area. (See Innervation below.) Recent authors indicate the only diagnostic injection that shows validity for the diagnosis of sacral lateral branch pain is the multisite, multi-depth technique. Sacral lateral blocks have been shown to have poor face value. They also do not protect normal volunteers from experiment sacroiliac pain (produced by using intra-articular injections). (Dreyfuss, 2008) (Dreyfuss, 2009) (Yin, 2003) (Manchikanti, 2013) (King, 2015) (Bogduk, 2015)

Diagnostic blocks in anticipation of SI neurotomy: The best way to screen in anticipation for a neurotomy has not been established. Discussion continues as to whether or not lateral branch bocks are necessary, or if intra-vs. peri-articular injections are indicated. There is no "gold standard" diagnostic test or procedure suggested to select the patients who will most benefit from this procedure (regardless of the technique). Published studies have used no confirmatory/prognostic test before proceeding to a definitive neurotomy. Studies have shown no prediction of success of neurotomy based on either prognostic intra-articular or lateral branch blocks, and the use of multiple SI joint local anesthetic blocks, near-complete pain relief from diagnostic blocks or prognostic lateral branch blocks is currently not recommended. (Cohen, 2009) In a 2012 poster presentation, Cheng et al. indicated that sacroiliac joint intra-articular steroid injections (used as a diagnostic indicator) did not directly predict pain relief with neurotomy, and as

noted above, they do not protect normal volunteers from experiment-induced sacroiliac pain. (Dreyfuss, 2008) (Cheng, 2012) (Cheng, 2013) See Sacroiliac radiofrequency neurotomy.
Innervation: Exact innervation of the joint and complex remains unclear. The anterior portion of the joint is thought to be innervated by branches of the lumbosacral trunk with no clear cut evidence of the involved nerves. Anterior innervation may also be supplied by the obturator nerve and superior gluteal nerve. The posterior portion is thought to be innervated by the posterior rami of L4-S3, although the actual innervation also remains unclear. Other research supports innervation by the S1 and S3 sacral dorsal rami. Myelinated and unmyelinated fibers along with encapsulated endings have been found in the joint. (Vallejo, 2006) (King, 2015) (Cox, 2014) (Roberts, 2014) (Vleeming, 2012) (Aydin, 2010) (Cohen, 2013) (Simopoulos, 2012) (Vanelderen, 2010) (Cohen, 2005) (Berthelot, 2006)
Factors that can affect sensitivity and specificity of diagnostic blocks: Placebo effect; Referred pain; Central sensitization; Expectation bias; Symptomatic blockade; Systemic absorption; Psychological issues. (Cohen, 2005)
Research addressing the use of diagnostic SI joint blocks: (1) In a literature review by Bertholet et al., SI blocks were found to be insufficiently sensitive or specific to be used as a diagnostic gold standard. Reasons given were discordance in results of two consecutive SI joint blocks and leakage of injection fluid into adjacent tissues. It is also mentioned that pain formerly believed to have a source within the SI joint could be secondary to extraarticular structures (including numerous surrounding ligaments). (Berthelot, 2006) (2) A systematic review commissioned by the American Pain Society (APS) and conducted at the Oregon Evidence-Based Practice Center states that there is insufficient evidence to evaluate validity or utility of diagnostic sacroiliac joint blocks, and that there is insufficient evidence to adequately evaluate benefits of sacroiliac joint steroid injection. (Chou, 2009) (3) The European Guidelines for the Diagnosis and Treatment of Pelvic Girdle Pain found there was insufficient evidence to use local SIJ injections as a diagnostic tool for pelvic girdle pain. Local SIJ injections as a diagnostic tool for pelvic girdle pain were not recommended. (Vleeming, 2008) (4) A review undertaken as a contribution to a multi-society Appropriate Use Criteria Task Force project convened by the International Spine Intervention Society addressed the validity of fluoroscopically guided diagnostic SI joint injections to diagnosis SI joint pain and predict a subsequent therapeutic response. The authors indicated it was not clear if image-guided intra-articular diagnostic injections of a local anesthetic predicted a positive response to a therapeutic agent. (Kennedy, 2015)

Sacroiliac injections, therapeutic
Not recommended (neither therapeutic sacroiliac intra-articular nor periarticular injections) for non-inflammatory sacroiliac pathology, based on insufficient evidence. Recommended on a case-by-case basis injections for inflammatory spondyloarthropathy (sacroiliitis). This is a condition that is generally considered rheumatologic in origin (classified as ankylosing spondylitis, psoriatic arthritis, reactive arthritis, arthritis associated with inflammatory bowel disease, and undifferentiated spondyloarthropathy). Instead of injections for non-inflammatory sacroiliac pathology, conservative treatment is recommended. Current

research is minimal in terms of trials of any sort that support the use of therapeutic sacroiliac intra-articular or periarticular injections for non-inflammatory pathology. Below are current reviews on the topic and articles cited. There is some evidence of success of treatment with injections for inflammatory spondyloarthropathy, although most rheumatologists now utilize biologic treatments (anti-TNF and/or disease modifying antirheumatic drugs) for treatment. Also seeSacroiliac problems, diagnosis; Sacroiliac injections, diagnostic.
Current research and reviews available:
Chou et al., 2009: This is a systematic review commissioned by the American Pain Society (APS) and conducted at the Oregon Evidence-Based Practice Center that states that there is insufficient evidence to evaluate validity or utility of therapeutic sacroiliac joint blocks. (Chou, 2009)
Vanelderen et al., 2010: These authors indicate that SI joint intra-articular injections may provide good pain relief for periods of up to 1 year, but give no reference to support this. They indicate periarticular sources of pain should be considered for treatment in addition to intra-articular injections. They describe in detail the Luukkainen et al. randomized trial of 24 patients who received periarticular injections with one month follow up (see below). (Luukkainen, 2002) They also cite Maugars et al.; a double-blind study evaluating SI joint injections for patients with spondyloarthropathy. The authors recommend intra-articular injections of local corticosteroid. (Vanelderen, 2010) (Luukkainen, 2002) (Maugars, 1996)
Hansen et al., 2012: Evidence was considered limited (or poor) for short-term and long-term relief from intra-articular steroid injections or periarticular injections. (Hansen, 2012)
Manchikanti et al., 2013: Evidence was considered limited for SI joint and periarticular injections. (Manchikanti, 2013)
Cohen et al., 2013: Cohen, et al. indicated that evidence for intra-articular injections was weak. They indicated there was moderate evidence supporting intra-articular injections for spondyloarthropathy and anecdotal evidence for beneficial effect in non-spondyloarthropathy pain. The authors listed a prospective study by Fischer et al., that found a mean duration of benefit of 12 months for juvenile patients with spondyloarthropathy who failed to respond to NSAIDs (a German language study). They also listed a study by Hanley et al., that examined 13 patients with inflammatory spondyloarthropathy and MRI evidence of sacroiliitis (the authors of this study indicated the injections were ineffective) .The Maugars study was also cited. (Cohen, 2013) (Fischer, 2003) (Hanley, 2000) (Maugars, 1996)
Itz et al, 2015: This is the Dutch Multidisciplinary Guideline for Invasive Treatment for Pain Syndromes of the Lumbosacral Spine. This group recommended intra-articular SI joint injections as “only study related” (because no literature is available, or case reports are insufficient to indicate effectiveness or safety to give a clear recommendation for practice). The two studies cited for support are those by Luukkainen, et al. and Maugars, et al. (Itz, 2015) (Luukkainen, 2002) (Maugars, 1996)
Chou et al., 2015: This is a report from the Agency for Healthcare Research and Quality. The evidence was considered insufficient to evaluate sacroiliac joint corticosteroid injections. The one study cited was Luukainen et al. (Chou, 2015) (Luukkainen, 2002)
Kennedy et al., 2015: A review was undertaken as a contribution to a multi-society Appropriate Use Criteria Task Force project convened by the International Spine

Intervention Society to assess effectiveness of intra-articular steroid injections in treating SI joint pain. Two randomized controlled trials were cited to support moderate strength recommendation for this treatment. The first was Maugars et al., 1996, and the second (Kim et al., 2010) was a study comparing intra-articular prolotherapy versus steroid injection. The authors of the Kim et al., study found that prolotherapy was a more successful therapy. Several observational studies were also cited. (Maugars, 1996) (Kim, 2010)

Other case series of intra-articular blocks for non-inflammatory pathology:

Lillang et al., 2009: This is a prospective case series of 39 patients who underwent dual diagnostic intra-articular blocks. Twenty-six (66.7%) experienced pain relief of greater than 50% for 5 weeks. Thirteen patients (33.3%) responded for a shorter term period (mean 4.4 ± 1.8 weeks). Risk factors for shorter term response included history of lumbosacral spinal fusion. (Lillang, 2009)

Research on periarticular or combined periarticular/intra-articular injections:

Luukkainen et al., 2002: This study, which is double-blind and controlled, is commonly cited to support periarticular injections. Twenty-four patients were treated with periarticular injections (13 with steroid and local and 11 with saline and local). Follow up was at 1 month with improvement in the steroid group. (Luukkainen, 2002)

Borowsky et al., 2008: This was a retrospective review of 2 large case series. Patients receiving intra-articular injections alone had a positive response (defined as a 50% drop in VAS pain score or a report that activities of daily living had “greatly improved”) at 3 months of 12.5% versus 31.25% for the combined injections. The authors suggested that significant extra-articular sources of sacroiliac region pain existed and that intra-articular diagnostic blocks underestimated the prevalence of sacroiliac region pain. (Borowsky, 2008)

Research on intra-articular injections for inflammatory spondyloarthropathy (in adults):

Hanly et al., 2000: This is a study of 19 patients with symptoms of inflammatory low back pain. Thirteen had radiographic evidence of sacroiliitis. All patients received bilateral SI joint injections with steroid. Transient improvement was most pronounced at 1-3 months after injection. This did not reach statistical significance by 6 months. The author’s conclusion was that the injections were ineffective in the management of patients with inflammatory spondyloarthropathy. (Hanly, 2000)

Maugars, 1996: This is a double blind study of 10 patients (13 injections) with painful sacroiliitis. In 5/6 joints injected in the treatment group the patients had relief of > 70% compared to 0/7 in the placebo group at one month. Re-injection with corticosteroid occurred at one month with inclusion of 6/7 of the placebo group. Results of this combined group showed 58% success at 6 months. (Maugers, 1996)

Bollow et al., 1996: Sixty-six patients with inflammatory back pain were treated with CT-guided corticosteroid injections. Statistically significant abatement of subjective complaints occurred in 92.5%. at 1.7 ± 1.1 weeks with improvement lasting for 10 ± 5 months. (Bollow, 1996)

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